# AD 67 1354



# LITERATURE SURVEY OF INFORMATION STORAGE AND RETRIEVAL SYSTEMS (MANUAL AND AUTOMATED) FOR LAW LIBRARIES

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MAY 1968

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# ABSTRACT

A literature search was conducted on the subject of manual and automated storage and retrieval systems for law collections. The search results formed the basis of a survey to determine specifically the format and availability of law sources, thesauri, and retrieval systems. The author does not imply that the search and ensuing survey are comprehensive and exhaustive in scope. While the Stanford University Law Library is available through the consultative offices of the law librarian, generally speaking, only the resources and facilities of the Technical Information Center, Lockheed Missiles & Space Company were used in writing this survey; the exceptions are the two manually compiled subject authority lists, which were identified by a staff librarian, University of Santa Clara Law School.

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#### **FOREWORD**

Irving Kayton, Associate Professor of Law at the George Washington University and a leading authority on the application of computers in law, recently made the following appraisal of the information retrieval problem in the legal profession:

"An information, or rather a printed matter, explosion is at hand, and the explosion is increasing in intensity exponentially, with little hope that a plateau will be reached. The world's libraries are increasing in volume at the rate of 35,000 words per second, or over one million volumes annually.

...We may rightly assume that the legal sector of the information explosion is continuing apace.

...Today there are over 2,300,000 reported cases, and the number of reported American decisions is estimated to be increasing at the rate of 22,000 per month."

It is clear that there is a great need at this time for automated information retrieval in the legal profession.

IMSC has, over the past three years, developed a state-of-the-art digital computer information retrieval system called DIALOG. DIALOG has for the past year supported an on-line video terminal at the NASA Library in Washington, D.C., where daily inquiries have been made against a file of 400,000 citations at the Lockheed Research Laboratory Computer Center in Palo Alto, California. The recent announcement by NASA that IMSC has been selected to develop and install a DIALOG-like nation-wide information retrieval system recognizes DIALOG as one of the most powerful information retrieval systems which is operational in the country today.

The attached literature search, in support of a DIALOG Legal Reference Retrieval System application, represents a current view of the state-of-the-art in legal reference retrieval, both manual and automated, and should therefore provide a useful bibliography for those interested in this field.

# I TASK STATEMENT

- A. Identify and locate sources; i.e., law reports, abstracts, citations, etc.; e.g., West Publishing Company's publications, Shephards Citations,
  - 1. Format: Are they manually compiled or are they computer produced and machine readable?
  - 2. Availability: Whether copyrighted or done on government grant?
- B. Identify and locate thesauri, terminology compilations, subject authority lists, etc.
  - 1. Format: Are they manually compiled or are they computer produced and machine readable?
  - 2. Availability: Whether copyrighted or done on government grant?
- C. Identify and locate law retrieval systems
  - 1. Format: Are they manual or automated systems?
  - 2. Availability: Whether copyrighted or done on government grant?

# II FACILITIES AND SOURCES AVAILABLE

A. Lockheed Missiles & Space Company, Technical Information Center

Abstracting Services:

Computer Abstracts Computing Reviews Data Processing Digest Library Literature

#### Periodicals Collection

In the 1,000+ collection of periodicals and trade journals, none is devoted to the field of law; however, approximately 5-10 current trade journals are in the field of computer applications and from time-to-time run articles on the subject of automating law collections.

B. Stanford University Law School, Library

The complete facilities and sources of this collection are available specifically through the consultative services of Prof. J. Myron Jacobstein, Law Librarian.

C. University of Santa Clara, Law School Library

W. L. Morrison and I have communicated by telephone with Mrs. Phyllis Hasencamp, a staff librarian, University of Santa Clara, Law School Library. Mrs. Hasencamp was instrumental in identifying the two classification schemes in manual form.

D. Defense Documentation Center

A request has been sent to the Center for a machine search of its files on IS & RS for law collections. The results are pending.

#### III. FINDINGS

# A. Sources of Law

(Time and money preclude the feasibility of a comprehensive listing of law sources; therefore, only those easily identified are included.)

The search did not uncover any evidence that there had been a significant undertaking to automate any one complete set of law sources. To date neither the West Company nor Shepard's have been particularly agressive in attempts to mechanize their systems (1). Law Research Service, Inc., New York, N. Y. has offered legal citation service via Western Union's nationwide computer system to 10 states and the District of Columbia (2). Law Research Service's sources were based on West Publishing Company's law services and current legal disputes among Law Research Services, Inc., its customers, Western Union and West Publishing Co., presumably have terminated this service.

U. S. Laws, Statutes, etc. Index to the federal statutes (1769-1673, 1874-1931) general and permanent law ....Wash., Govt. Prt. Off., 1911-33, 2v.

The volume for 1789-1873 indexes v.1-17 of the Statutes at large the volume for 1874-1931 indexes the Revised statutes of 1874 and the Statutes at large, v.18-46; this latter volume is a revision by W. H. McClenon and W. C. Gilbert of the Scott and Beaman Index analysis of the federal statutes 1874-1907.

These two volumes index all federal legislation of a public, general, and permanent nature through 1931.

## Government Publication

Revised statutes of the United States, passed at the first session of the Forty-third Congress, 1873-74; embracing the statutes of the United States, general and permanent in their nature, in force Dec. 1, 1873. 2d ed. Wash., Govt. Prt. Off., 1870. 1394p.

In 1007 a commission was appointed to compile all the general and permanent laws by subject. The first revision, accepted and published as the Revised statutes of 1873, contained certain liberties in the texts taken by the revisers. The Revised statutes, 2d ed. 1678, restored the original text, and is the edition usually cited. Supplements were made and published in 1891 and 1901, but these are now largely superseded by the Code.

# Government Publication

——United States statutes at large containing the laws and concurrent resolutions enacted . . . and reorganization plans and proclamations, 1789-1873; 1873- . Boston, Little, 1845-73; Wash., Govt. Prt. Off., 1875- . v.l- .

Title varies slightly.

The present series of Statutes at large starts with v. 18 (1873-75). It was preceded by the Laws of the United States: Folwell edition, for the first 13 Congresses, 1789-1813; Bioren and Duane edition, for the first 28 Congresses, 1789-1845; Little, Brown edition, called Statutes at large, covering the first 42 Congresses, 1789-1873, and ending with v.17. This series was taken over by the federal government, v.18-

Contents vary, but beginning with v.65, 1951, each volume contains public laws, reorganization plans, private laws, and concurrent resolutions and proclamations. Arrangement is chronological by date of passage of the act under the divisions: Public laws, Private laws, etc. A subject index and a personal-name index in each volume.

Slip laws are published separately, as soon as enacted, in two series: (1) Public Acts (cited as Public Law), and (2) Private Acts (cited as Private Law), and are superseded upon publication of the Statutes at large. Slip laws and resolutions are listed in the Monthly catalog under "Congress" and then by number.

Treaties to which the United States was a party (1776-1949) were published in the Statutes at large, 1848-1949. Since Jan. 1, 1950, they have been contained in United States treaties and other international agreements.

# Government Publication

U.S. Laws, Statutes, etc. United States code Congressional and administrative news. Acts of 76th Congress, Jan. 3, 1939- . St. Paul, Minn., West Pub. Co.; Brooklyn, N.Y., Edward Thompson Co., 1942- .

Published semimonthly during the session of Congress and monthly when Congress is not in session, with annual bound cumulations. Coverage varies somewhat; recent volumes include all public laws (full text), legislative history, executive orders, presidential proclamations, administrative regulations, messages of the president, popular names of laws, etc. Current issues contain index-digest of bills enacted.

Copyrighted.

United States code, 1958 ed. Wash., Govt. Prt. Off., 1959. 13v.

Supersedes previous editions published 1926, 1934, 1940, 1945, 1952.

Cited as U.S.C.

This code contains all general and permanent laws of the United States in force on Jan.  $\acute{0}$ , 1959, arranged under 50 titles, i.e., subjects with many subdivisions, called chapters.

Cumulative supplements issued annually.

Government Publication

United States code annotated. St. Paul, Minn., West Pub. Co., 1927 v.l
Cited as U.S.C.A.
Comprises all laws of a general and permanent nature under the same arrangement as that of the Code Annotations are from Federal and State court reports and opinions of the United States Attorney-General.
Kept up to date by cumulative, annual, pocket parts containing amendments and additions. Later replacement volumes are issued from time to time.
Copyrighted
Federal code annotated; all federal laws of a general and permanent nature fully annotated to the decisions of federal and state tribunals, together with annotations of uncodified laws and treaties, executive orders, proclamations, and law review articles. Indianapolis, Bobbs-Merrill, 1937 v.l
Cited as F.C.A.
Volumes replaced at intervals by perpetual revision plan. Groups related material into volumes, e.g., Federal taxation, Transportation and communication, Bankruptcy, etc.
Ten-year cumulative supplement for v.1-13. Titles 1-50, 1947- $\frac{1}{1}$ v.1-5. (In progress)
Index, (c1962). 2v.
Copyrighted
Constitution of the United States annotated; annotated from federal and state courts (1949-1961). 6v. West Publishing Co.
General index, (1962). 5v.
Tables, (1962).
Copyrighted
U.S. Library of Congress. Legislative Reference Service. Digest of public general bills and selected resolutions with index, 74th Cong., 2d sess 1936 Wash., Govt. Prt. Off., 1930
Normally published each session in 5 cumulative issues with biweekly supplements.
Provides a brief synopsis, the essential features of public bills and resolutions and changes made therein during the legislative process."  Foreword.
Government Publication

Commerce Clearing House. Congressional index service. 75th Congress, 1937/38-. Chicago, Commerce Clearing House, Loose Leaf Service Division of the Corporation Trust Co., 1937-. Weekly throughout session. Loose-leaf.

"Indexes all congressional bills and resolutions of general interest and lists their current status. It is designed to lay open to the user a complete record of federal legislation and its progress from initial introduction to final disposition."

Now includes treaties.

Contains section on voting records in which all roll-call votes on the progress of legislation are reported weekly.

Copyrighted

Shepard's Citations, Inc. A table of federal acts by popular names or short titles to Jan. 1, 1964. Colorado Springs, Shepard's Citations, (1964). 1969.

1st ed. 1931. Frequently revised.

Title varies slightly.

Subtitle: A compilation of popular names or short titles by which rejeral acts have been referred to or cited together with an identification of each act in terms of the United States code, or the United States statutes at large

Table of federal and state cases by popular names. Colorado Springs, Shepard's Citations, 1957. 96p.

1st ed. 1934. Frequently revised.

Title varies slightly.

Subtitle: A compilation of popular names by which rederal and state cases have been referred to or cited, together with the volume and page references for such cases.

Supplement.	Jan.	ı,	1957	to	Jan.	l,	1962.	15p.	(3)
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Copyrighted

Food Drug Law Service

Cuts across a particular subject field. It has an index with approximately 11,500 entries. (3)

Copyrighted

Prentice-Hall Federal Tax Service

Mas 57,000 index entries in its publication (3)

Copyrighted

Labor Relations Reporter

The indexes in this set run to about 89,000 entries (3).

Copyrighted

Code of federal regulations. 1949 ed., containing a codification of documents of general applicability and future effect as of Dec. 31, 1948, with ancillaries and index. Pub. by the Division of the Federal Register, National Archives. Wash., Govt. Prt. Off., 1949- . (In progress)

Cited as C.F.R.

Kept up to date by pocket supplements, cumulating annually.

This is the second edition of the Code (1st ed. 1938), and contains a "codification of the Federal Administrative rules and regulations, general and permanent.. dully promulgated on or before Dec. 31, 1948, and effective as to facts arising on and after Jan. 1, 1949."

The volumes form basic volumes for the type of material published currently in the Federal register

General index, (1955).

Title 3, The President. Compilation contains the full text of presidential documents. With ancillaries and index, 1943/48-19,9/63. v.1-4.

Government Publication

United States. Federal register, March 14, 1936- . Wash., Govt. Prt. Off. 1932- . Daily, except Sun., Mon., and day following legal holiday.

Contains all presidential proclamations are executive orders; rules and regulations of the various bureaus and departments of the government; and decisions of fact-finding bodies. Has monthly, quarterly, and annual indexes.

Government Publication

# American Digest System

Includes 2,200,000 cases with descriptive word indexes of some 2,000,000 word-phrases. (3)

Copyrighted

# American Law Reports

The 1st Series had a four volume index with over 1,000 pages in each of the volumes. The Annotated Reports have mechanical devices for up-dating the annotations. This competing search mechanism is complemented by its encyclopedia, which has a descriptive fact word index of over four volumes. (3)

# Copyrighted

Corpus Juris and Corpus Juris secundum; a complete restatement of the entire American law as developed by all reported cases, by William Mack and Donald J. Kiser, assisted by the combined editorial staffs of the American Law Book Co. and the West Publishing Co. Brooklyn, N.Y., Amer. Law Book Co., (c1936-c1958). lolv.

Cited as C.J.S.

A new edition, superseding Corpus Juris (CJ). 1914-37. 72v. However, case citations refer to decisions handed down since the publication of C.J. For earlier authorities a specific reference to C.J. cites all cases back to 1658. This makes the original work still valuable.

Kept up to date by cumulative annual parts and recompiled volumes.

General index. 1959-60. 5v.

These are based on 400 topics and have respectively, some 300,000 word-phrase entries in Corpus Juris and some 450,000 word-phrase entries in Corpus Juris Secundum. (3)

# Copyrighted

American jurisprudence; a modern comprehensive text statement of American law, state and federal, 2d ed. Compl. rev. and rewritten...by the editorial staff of the publishers. Rochester, N.Y., Lawyers Co-operative; San Francisco, Bancroft-Whitney, 1962- . v.1-17. (In progress)

1st ed. 1930-02, 58v; General index. 1951-52. 4v.

Kept up to date by annual, cumulative, pocket supplements.

Each volume has subject index.

Copyrighted

Legal periodical digest, 1928- . N.Y., Commerce Clearing House, 1928- . v.1-

Title varies.

Loose-leaf abstracting service, consisting of monthly issues of digests of the leading articles appearing in United States, Canadian, Philippine, and Puerto Rican legal periodicals. Digests are on sheets for insertion in a loose-leaf binder according to subject.

The index section contains: (1) topical index; (2) author index; (3) table of articles, issued semiannually and annually, the annual index being cumulated for the year; (4) case comments by case names; (5) table of abbreviations; and (1) citation reference table.

# Copyrighted

State law index; an index to the legislation of the states of the United States enacted . . . 1925/26-1947/48. Wash., Govt. Prt. Off., 1929-49. v.1-12. Biennial.

# Ceased publication

Title varies

1925/20-1933/34, compiled by the Legislative Reference Service of the Library of Congress...; 1935/36-1947/48, by the State Law Index, Library of Congress.

Government Publication.

B. Thesauri, subject authority lists, etc.

## 1. Thesauri

- a. Manual: None identified by this search.
- b. Computer-produced: American Bar Foundation using 5,000 decisions from the Northeastern Reporter has a thesaurus constructed in the computer. (4)

Project Director, William B. Eldridge, A3F.

Status: Under development

Availability: Mr. Jacobstein has communicated with the ABF regarding availability. The answer is pending.

- 2. Subject Authority Lists (Classification schemes)
  - a. Manual: Ellinger, Werner Bruno, ed.
    Subject headings for the literature of law and international law.
    South Hackensack, N.J., Published for the American Association of Law Libraries, by F. B. Rothman, 1903. 300p.
    Copyrighted. A copy has been requested as a laboratory tool for 0/5(-40.

(U.S.) Library of Congress. Subject Cataloging Division. Classification, Class K: Law. 1967.
Non copyrighted and available by purchase from the library. A copy has been requested as a laboratory tool for 0/56-40.

b. Machine: none identified by the literature search.

#### 3. Indexes

#### a. Manual

NOTE: I have encountered semantical ambiguity in the use of the word "index". Shepard's Citation's (considered by the legal profession to be an index) is more encompassing than The Index to Legal Periodicals. In compiling this report, I have attempted to separate the two definitions, using the librarian's approach for the sake of clarity. As is noted in the references, the various citators and compilations of statutes contain comprehensive indexes, which have potential value for classification schemes.

Index to legal periodical literature. Boston, Boston Book Co., leoc-1919; Chipman, 1924; Indianapolis, Bobbs-Merrill, 1933; Los Angeles, Parker and Baird, 1939. v.1-6.

v.1-2, ed. by Leonard A. Jones; v.3-6, by Frank E. Chipman. v.1, to 1866; v.2, 1687-90; v.3, 1696-1906; v.4, 1906-22; v.5, 1923-32; v.6, 1923-37.

Each volume consists of a main subject index, with brief author index to the subject part. Indexes periodical literature in the English language on technical and historical law subjects; legal biography; and a considerable number of articles on political, economic, and sociological subjects. v.l indexes practically all articles in 150 legal periodicals (1373v.); all articles on law subjects in 113 general periodicals (including a few sets published in the 16th century); and the proceedings of various bar associations. v.4 indexes 51 periodicals and is practically a consolidation of v.1-14 of the annual Index to legal periodicals.

Useful in the general library as well as in the law library.

# Copy righted

Index to foreign legal periodicals. London, pub. by the Inst. of Advanced Legal Studies, Univ. of London, in cooperation with the Alerical Association of Law Libraries. 1900- . v.l- . Quarterly, cululating annually.

Indexes "the main legal periodicals dealing with international law (public and private), comparative law and the municipal law of all countries of the world other than the United States, the British Isles and countries of the British Commonwealth...." - Pref. Beginning with v.4 (1963), collections of legal essays such as Festschriften are also indexed.

Commignited

Index to legal periodicals, 1905- , pub. For the American Association of Law Libraries. N.Y., Wilson, 1909- .

Monthly indexes (frequency varies), with annual cumulations and, from 1926, 3-year cumulations which supersede the annual. The cumulated volumes consist of a subject and author index; a table of cases; and, since 1940, a book review index. Number of periodicals indexed varies from 39 in the 1908 annual to 290 in the 1961-64 cumulation. Earlier volumes indexed bar association and judicial council reports.

Copyrighted

George Washington University. Graduate School of Public Law. A retrieval system using descriptors, which are manually abstracted from the source material and the index is manually prepared. (5)

Availability: Unknown

California State Library. Law Library

Index to California Legal Periodicals and Documents. Sacramento. 1904- . (6)

Availability: Unknown

Massachusetts State Library, Boston.

Index of Special Reports Authorized by the General Court, 1900-1961. Boston, 1962.

Availability: Unknown

b. Automated

American Bar Foundation

Current index of newly enacted state legislation. This index is constructed by means of a computer from the titles of the laws themselves in the KWIC format. (7)

Availability: Mr. Jacobstein is investigating.

American Bar Foundation

The index to Legal Theses and Research Projects. Now produced with the aid of a computer. ( $\xi$ ) (9)

Availability: Ar. Jacobstein is investigating.

# C. Retrieval Systems for Law Collections

#### a. lianual

Harvard University. Law School. Library
Catalog of International Law and Relations. Ed. by Margaret Moody.
Cambridge, Mass., 1965- 21 vols. This is a photographic reproduction of the catalog, in classified arrangement, of the largest international law library in the world. (6)

Availability: Mr. Jacobstein is investigating.

Philadelphia. Free Public Library. Hampton L. Carson Collection. Catalog of the Hampton L. Carson Collection Illustrative of the Growth of the Common Law, in the Free Library of Philadelphia. Boston, G. K. Hall & Co., 1962. 2 vols. (6)

Availability: Mr. Jacobstein is investigating.

New York University. Law Center. Catalog of the Law Collection with Selected Annotations. Ed. by Julius J. Marke. NYU, Law Center, 1953. (6)

Availability: Mr. Jacobstein is investigating.

McGill University. Library. Catalog of Air and Space Law Materials, July 1, 1905. Montreal, Institute of Air and Space Law, 1965. (6)

Availability: Mr. Jacobstein is investigating.

Council on Library Resources/Matthew Bender & Co., Bureau of National Affairs, and the Michie Co.

Project Lawsearch. Uses manually selected peek-a-boo cards in the Termatrex System of Jonkers Business Machines, Inc. (7) (10) (15)

Availability: Unknown.

#### b. Automated

The most up-to-date and comprehensive report of automated legal retrieval systems, which I have been able to identify, is the paper by Aviezri S. Fraenkel entitled "Legal Information." It is still unpublished; a review copy is in the possession of Myron Jacobstein. The work was performed in part under a great from the U. S. government.

Probably the most ambitious undertaking thus far in legal retrieval systems is that of John F. Horty, the University of Pittsburgh, Health Law Center. The tape library includes the entire statutes of Pennsylvania, New York, and New Jersey, entire U.S. Code and the health laws of approximately 15 states. (1) (3) (7) (10) (11) (12) (13) (14) (15) (16) (19) (20) (21)

Availability: Unknown.

Other attempts to design and develop legal retrieval systems include:

The University of Iowa (5)

Availability: Unknown.

George Washington University
This may be described as a combination manual/automated retrieval system, as the index part to the system has previously been listed under manual indexes or descriptor compilations. (5) (7) (14)

Availability: Unknown.

Oklahoma State University

This system has been referred to by its director, Robert T. Morgan, Assistant Professor of Business Law, as the "point-of-law" approach. Its purpose is to aid in determining relevancy to particular cases rather than merely serving as an information data base. (5) (7) (10) (12) (14) (15) (17) (18)

Availability: Unknown.

Southwestern Legal Foundation, Southern Methodist University. (7) (10) (12) (13) (14)

Availability: Unknown.

Western Reserve University. (7) (10) (15) (17)

Availability: Unknown.

IBM/H.P. Luhn (17)

Availability: Unknown.

American Bar Foundation (16)

Availability: Unknown

U. S. Department of Justice (16)

Availability: Unknown.

U. S. Federal Aviation Administration (16)

Availability: Unknown.

U. S. Department of Defense (U.S. Air Force. Office of the Staff Judge Advocate). Project LITE-Legal Information Through Electronics. Developed in cooperation with the Health Law Center, University of Pittsburgh. (21) (22)

Availability: Unknown.

#### IV. SUMMARY & RECOMMENDATIONS

#### A. Summary

The search did not uncover any evidence that there had been a significant undertaking to automate any one complete set of law sources. No manually compiled thesauri were identified by the search; however, the George Washington University IS&RS uses a manually compiled index or descriptor list (5). One computerproduced thesaurus was identified; at this writing it should be considered as being in the developmental rather than the operational stage (4). Two manually compiled subject authority lists (classification schemes), but no computer-produced subject authority lists were identified. At least thirteen of the law sources have general indexes; also, the literature search identified six publications, which would be considered by librarians to be indexes of law literature. The American Bar Foundation has developed two computer-produced indexes. Of the five manual retrieval systems listed in this survey, four are book catalogs of law collections (6). The remaining one, "Project Lawsearch", is based on the Termatrex, system (7) (10) (15). Ten automated retrieval systems in various stages of development have been identified by the literature search.

# B. Recommendations

Most of the references offered only sketchy descriptions of the ten retrieval systems; therefore, letters inquiring about the current status of the projects and about the availability of the computer programs and/or tapes should be sent to the universities and organizations under whose sponsorship the projects were initiated.

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  The Practical Lawyer, March 1967, pages 10-17.
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Law, Logic and The Computer: Bibliography with Assorted Background Material
Computer Reviews, January-February 1966, p. 95-114.

Law and Computer Technology. A new journal, which began publication in January 1968. It is to be published monthly by the World Peace Through Law Center's Section on Law and Computer Technology. Each issue contains a section on current bibliograph. Subscription is \$20 per year for non-members, available through the World Peace Through Law Center, 839 17th Street, NW, Washington, D. C. 20006.

# UNCLASSIFIED

Security Classification							
GOCUMENT CONTROL DATA - R & D							
(Security classification of title, body of abstract and indexing	g annotation must be						
1 ORIGINATING ACTIVITY (Corporate author)		1	CURITY CLASSIFIC	ATION			
Palo Alto		UNCLASSIFIED					
Lockheed Research Laboratory	Zb. GROUP						
3 REPORT TITLE							
LITERATURE SURVEY OF INFORMATION STO (MANUAL AND AUTOMATED) FOR LAW LIBR		RIEVAL SYS	TEMS				
4 DESCRIPTIVE NOTES (Type of report and inclusive dates)	2060						
Literature Search. Circa 1960-May:	1966	<del></del>					
i de la company							
George R. Evans							
6 REPORT DATE	78. TOTAL NO O	F PAGES	7b. NO OF REFS				
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	94. ORIGINATOR	S REPORT NUME	3ER(\$)				
Independent Research & Development  b. PROJECT NO	IMSC SB 68-1						
с.	9b. OTHER REPO	9T NO(S) (Any of	her numbers that may	be assigned			
d.	LMSC	6-96-68-3					
10 DISTRIBUTION STATEMENT	<del></del>						
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